

Date: Tuesday, 11/13/2007 1:28:27 PM
 User: Kim Johnston

Process Sheet

49

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SHORT STEP ASSEMBLY HIGH SKID RH
 Job Number : 35673
 Estimate Number : 10720
 P.O. Number : N/A Part Number : D350591214
 This Issue : 11/13/2007 S.O. No. : N/A Drawing Number : D3078 REV A
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : LARGE FAB ASSY Drawing Revision : A
 Previous Run : 34845 Material : N/A
 Written By : Due Date : 12/2/2007 Qty: 10 Um: Each
 Checked & Approved By :
 Comment : Est Rev:B 05.10.14 Modified step 10 KJ/EC
 Est Rev:C 06-06-19 Added D2732-030 AS PER DSI9294
 JLM
 Est Rev:C 06-06-27 Revised as per DSI9340 JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



2-3 07.11.21

Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-214 CHG002

5 07.12.05

2.0 D2622120C Extrusion



Comment: Qty.: 0.5000 Each(s)/Unit Total : 5.0000 Each(s)

Pick:

Qty Part Number Description Batch

.5 D2622-120 Extrusion 334694

07.11.26

10

3.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622-120 extrusion to 59.75" long as per Dwg D3078

07.11.26

10

2-Drill extrusion as per Dwg D3078 using Jig DT8680 for rivets.

07.11.26

10

3-Deburr

07.11.26

10

4.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 07.11.07 *1024

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Job Number: 35673

Part Number: D350591214

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

D30671

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D3067-1

End Plate 835079

See 07-11-27 10

6.0

D30631

Support



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D3063-1

Support 830892

See 07-11-27 10

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8681, weld Fwd End Plate as per QSI 004 & Dwg D3078

A/R Aluminum Rod M105058
M105844

3-Grind End Plate flush

A.M 07.11.28

See 07-11-27 10
See 07-11-27 10

8.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

10 07-11-28 (10)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/11/28 (10) RH

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

A.M 07.11.28 10

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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Drawing Name: SH0RT STEP ASSEMBLY HIGH SKID RH

Job Number: 35673

Part Number: D350591214

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FD

07/11/28

(10)

12.0

D3065041

Step Leg Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3065-041

Step Leg Assy

B33510

a.m

07.11.28

10

13.0

D30661

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 D3066-1

Spacer

B35682

a.m

07.11.28

10

14.0

MS20600AD4W4

Rivets



Comment: Qty.: 16.0000 Each(s)/Unit Total : 160.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

16 MS20600AD4W4

Rivet

M105953

a.m

07.11.28

10

15.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Rivet Leg Assembly as per Dwg D3078.

a.m

07.11.28

10

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

6

A/11/29

(X10RH)

17.0

D30671

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3067-1

End Plate

B35079

A/07.11.28

10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID RH

Job Number: 35673

Part Number: D350591214

Job Number:



Seq. #: Machine Or Operation: Description:

18.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel Aft end for welding

2-Inspect for foreign object as per QSI 024

3-Weld Aft End Plate as per QSI 004 & Dwg D3078

A/R Aluminum Rod M105058

4-Grind End Plate flush

Q M 07.12.03

07.11.28 10
07.11.28 10
07.11.28 10

10

19.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

07-12-04 (10)

20.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/12/04 10RH

21.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch Up Chemical conversion

M-1 07/12/04

10X RH

22.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M105914

M-1 / FL 07/12/04

10X RH

23.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3078 and QSI 005 4.4

M105030

FL 07/12/04 (10)

24.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: Inspect Powder Coat and Wing Walk

M-1 07/12/05

10X

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID RH

Job Number: 35673

Part Number: D350591214

Job Number:



Seq. #:

Machine Or Operation:

Description :

25.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

26.0

D22303

Mounting Lug



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 D2230-3

Clamp

153570 SEP

27.0

D22301

Mounting Lug



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 D2230-1

Clamp

1532163 SEP

28.0

D2732

Rubber Extrusion



Comment: Qty.: 0.0000 f(s)/Unit Total : 5.0000 f(s)

Rubber Extrusion

4 X 3"

Batch:

34717

SEP

29.0

D2856400

Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total : 6.0000 f(s)

Pick: Packing Kit

Qty Part Number Description Batch

1 D2856-400(7.2") Abrasion Strip

34642

SEP

30.0

AN335A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 AN3-35A

Bolt

M105406

7/11/30 SEP (OX)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Job Number: 35673

Part Number: D350591214

Job Number:



Seq. #:

Machine Or Operation:

Description :

31.0

AN411A

Bolt



Comment: Qty.: 6.0000 Each(s)/Unit Total : 60.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

6 AN4-11A

Bolt

M102280

43 SQ

6

M103947

M100743

32.0

AN413A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 40.0000 Each(s)

Bolt

Batch: *M106043*

SQ

33.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 40.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

4 AN960JD10

Washer

M105792

SQ

34.0

AN960JD416

Washer



Comment: Qty.: 12.0000 Each(s)/Unit Total : 120.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

12 AN960JD416

Washer

M105906

SQ

35.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 MS21042L3

Nut (or -3)

M102658

8 M105558 SQ

36.0

MS21042L4

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total : 60.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

6 MS21042L4

Nut (or -4)

M105054

7/4/30 SQ 102

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: D Date: 07/12/06
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SH0RT STEP ASSEMBLY HIGH SKID RH

Job Number: 35673

Part Number: D350591214

Job Number:



Seq. #:

Machine Or Operation:

Description :

37.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

Handwritten: 7/12/05 (10)

38.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-214

Location: _____

PPP Rev: _____

Handwritten: Ce. 7/14/05 (10)

39.0

QC21

FINAL INSPECTION/W/O RELEASE



Handwritten: (10)

Comment: FINAL INSPECTION/W/O RELEASE

Handwritten: 7/12/06

Job Completion



Handwritten: 7/12/05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3078	REV. A SHEET 1 OF 2
DATE 02.09.11		TITLE STEP ASSEMBLY, HI SHORT SCALE NTS	
A	02.09.11	NEW ISSUE	

RELEASED
02.09.20 *#*

Part No.	Description	QTY -041	QTY -042
D3078-041	Step Assembly, High Short (LH)	X	
D3078-042	Step Assembly, High Short (RH)		X
D2622-60	STEP EXTRUSION	1	1
D3063-1	SUPPORT	1	1
D3065-041	LEG ASSEMBLY	1	1
D3066-1	SPACER	2	2
D3067-1	END PLATE	2	2
MS20600AD4W4	RIVET	16	16

GENERAL NOTES:

- 1) -041 SHOWN, FOR -042 INSTALL D3063-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. **35673**

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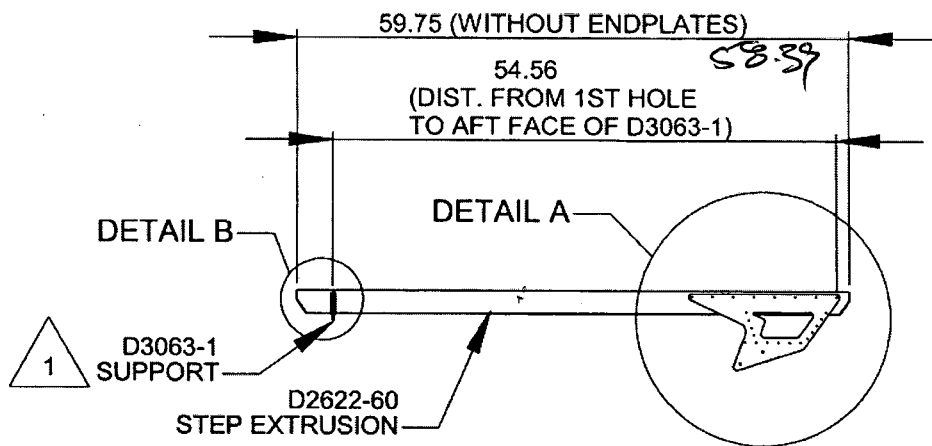
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DART



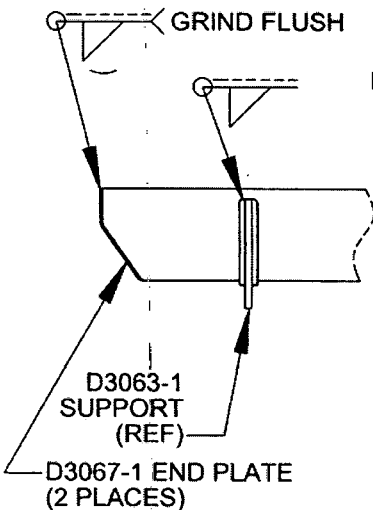
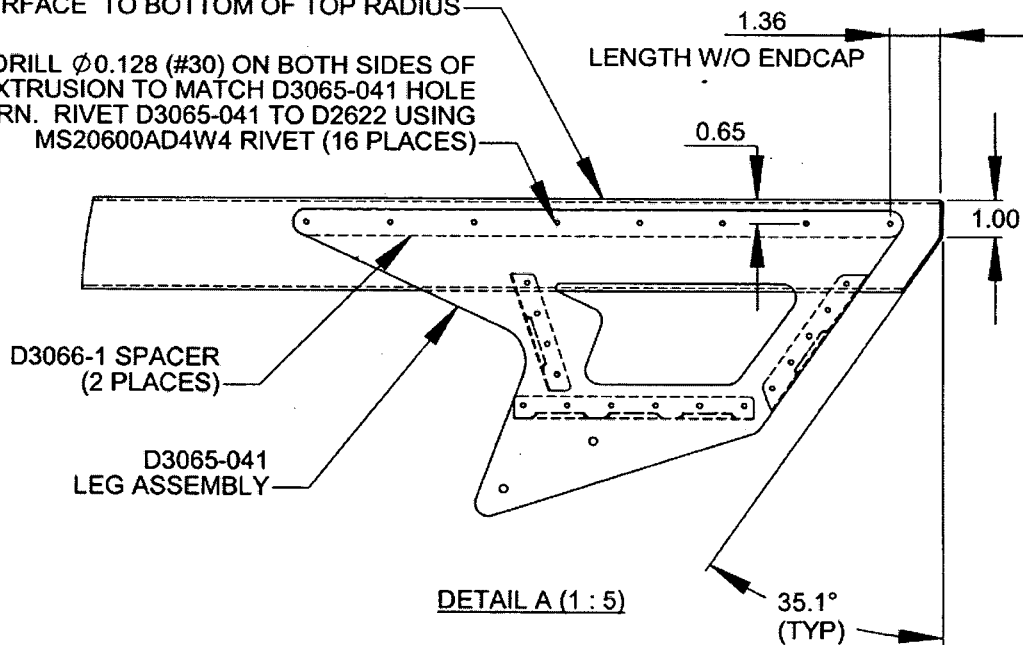
DESIGN	VP	DRAWN BY	VP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	✓	APPROVED	✓	REV. A
DATE	02.09.11	TITLE	D3078	SHEET 2 OF 2
			STEP ASSEMBLY, HI SHORT	SCALE 1:20

RELEASED
02.09.2004



APPLY BLACK ANTI-SKID ON TOP
SURFACE TO BOTTOM OF TOP RADIUS

DRILL $\varnothing 0.128$ (#30) ON BOTH SIDES OF
D2622 EXTRUSION TO MATCH D3065-041 HOLE
PATTERN. RIVET D3065-041 TO D2622 USING
MS20600AD4W4 RIVET (16 PLACES)



DETAIL B (1 : 5)

DETAIL A (1 : 5)

83.20

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NO. 33673

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